



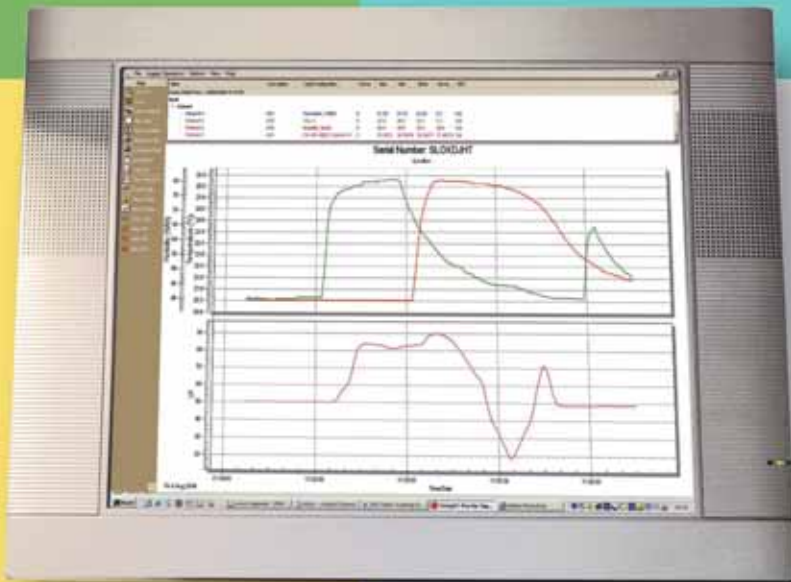
 **STATUS**
INSTRUMENTS

INTRODUCES

Signatrol Data Loggers

PRODUCT GUIDE

**POWERFUL, YET
EASY TO USE**



TempIT data analysis software is available in three formats; **TempIT-Lite** which provides all essential graphing functions, **TempIT-Pro** which incorporates additional features such as a data table, export to spreadsheet functions and the ability to e-mail graphs. **TempIT-HS** is a high-security version that supports electronic signatures, stores data in a secure format and provides a full audit trail, essential when high data security is needed or where FDA 21CFR Part 11 compliance is required.

All versions of TempIT have the ability to show the temperature in °C or °F units, auto scale or

fixed axis and the ability to change trace color and width.

Features

- Lite Version - FREE
- Simple to use
- Multi graph capability
- Full X-Y Zoom Facility
- Data Table
- Export Facility
- MKT Calculation

TempIT-Lite TempIT-Lite provides all the features necessary for configuration and issue of the data loggers, as well as a graphical viewer for analyzing data from the SL50, SL120, SL130, SL150 and SL7000 series data loggers. A historical trace is produced which shows the stored temperature profile with full X-Y zoom.

TempIT-Pro* The professional version of TempIT, TempIT-Pro contains all the functionality of TempIT-Lite but with the added benefits of a data table, export to spreadsheet function and the facility to e-mail graphs anywhere in the world. The data table is also available on a separate page.

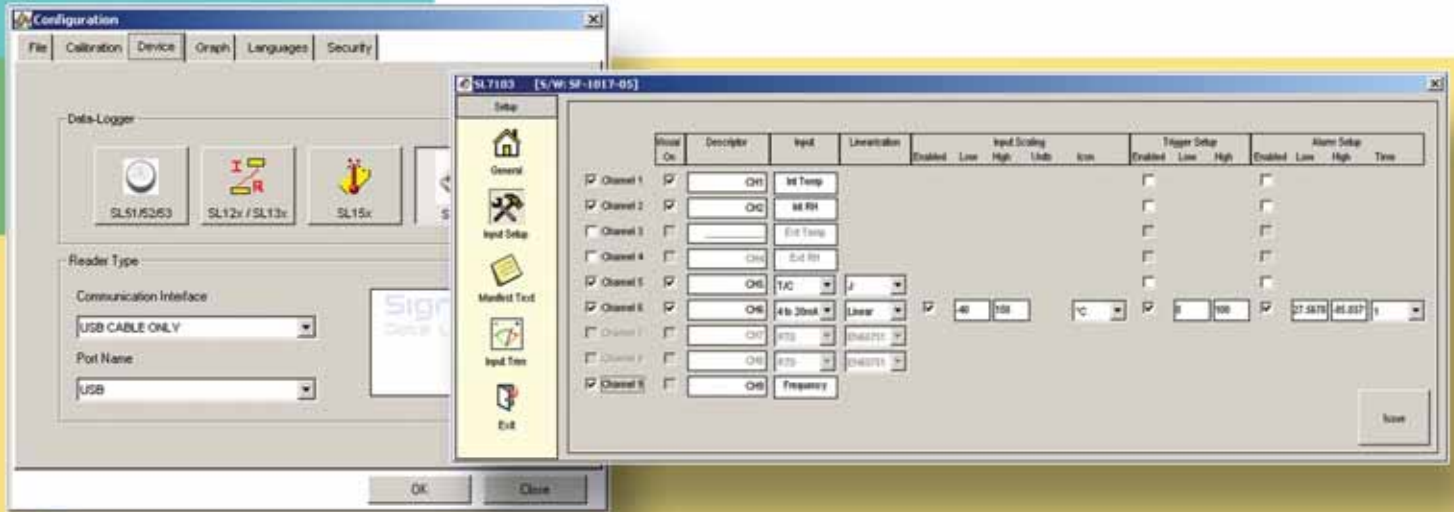
Data can be easily exported in comma-separated value format (CSV). That can be imported into spreadsheet programs like Excel or Lotus 1-2-3. A built-in e-mail facility enables graphs to be sent to remote locations. E-mailing the graph is a useful function for incoming goods inspectors who need to have quality approval before accepting shipments.

TempIT-HS With TempIT-HS High Security software, the users are registered with Signatrol. This high security software handles all the requirements for a system complying with FDA 21 CFR PART 11. It manages and controls users, supports electronic signatures, stores the data in a secure format, keeps track of calibration information, provides manual or automatic archiving and keeps track of all operations, providing a full audit trail.

(Note: TempIT-HS is currently only available in version 3 and does not support SL7000 series devices.)

Please contact our Sales Office for availability.

* Now available; dongle-protected for multiple PC operation.



Function	TempIT-Lite version 4	TempIT-Pro version 4	TempIT-HS version 3
Issuing of Loggers	✓	✓	✓
Issuing of SL151T-HS tags (Version 3 only)			✓
View Manifest	✓	✓	✓
View Graph	✓	✓	✓
X-Y Zoom	✓	✓	✓
1 Trace			✓
Up to 2 Traces each individually scaled	✓		
Multi-Trace individually scaled		✓	
Auto scale function on Y axis	✓	✓	✓
Change units between °C and °F	✓	✓	✓
View Graph	✓	✓	✓
View data from SL151T-HS tags	✓	✓	✓
Save data from SL151T-HS tags in non secure format	✓	✓	
View data table		✓	✓
Export data in CSV format		✓	✓
E-mail graph		✓	✓
Electronic signature support			✓
Save data from SL151T-HS tags in secure encrypted format			✓
Automatic archiving			✓
Manage users			✓
Manage calibrations			✓
Audit trail			✓

Order Codes

TempIT-Lite
TempIT-Pro*
TempIT-HS

Infinite user license, free of charge from www.statinst.com

Single computer use, one-off charge

Single computer use, one-off charge depends upon number of users

SL50 series

Single Channel 'Button' Temperature Data Logger



**OUR LOWEST
COST LOGGER**

The SL50 Series are self-contained single channel temperature data loggers with the ability to record over 8,000 data points. They operate in a temperature range of -40°C to +125°C

and can record temperature, or temperature and humidity, depending upon the model chosen. They are very small (about the same size as a watch battery) which enables them to be inserted into small items and packages.

The SL50R Button Reader™ interfaces to the RS232/USB port of a PC and is totally compatible with the TempIT operating software (see pages 2/3) which enables the logger to be set up and the data read and displayed in graphical format. Data can be stored and retrieved at a later time. The software can be up-graded to TempIT-Pro which provides various additional features such as Data table, e-mail graphs and automated MKT Calculations etc.

Features

- Self-contained temperature logger
- Monitor from - 40°C to +125°C
- Water-resistant to 1 meter
- TempIT compliant

Specification at 20°C

	SL51T	SL52/53T	SL54TH
Sensor (Internal Sensor)	Temperature -40 to +85°C	Temperature SL52 -40 to 85°C SL53 0 to +125°C	Temperature / RH Temp: -20 to 85°C RH: 0 to 100%
Sensor Accuracy	1°C from -30 to +70°C 1.3°C outside this band	SL52 0.5°C from -10 to +65 SL53 0.5°C from +20 to +75	0.5°C from -10 to +65 RH: ± 5%
Battery Life	10 years or 1M Temperature Measurements @ Ta<50°C	Depends upon sample rate and ambient temperature ¹	
Sampling Rates (User selectable)	1 to 255 minutes	1 sec to 24 hrs ^{1 2}	
Memory Size (Readings)	2,048	8,192 – Low Resolution Mode ³ 4,096 – High Resolution Mode ³	
Resolution	8 bit – 0.5°C	8 or 11 Bit (0.0625°C) ³	Temp: 8 or 11 bit RH: 8 or 12 bit
Size	17 mm diameter x 6 mm height.		
Case Material	305 stainless steel		
Weight	4 g		
Sealing	Water Resistant	Waterproof to 1 meter	N/A
Communication	RS232 Serial / USB		
Sampling Methods	Continuous (First-in./First-out) or Stop when full. ²		
Alarms	High and Low		
Owner Manifest Data	Up to 36 Characters		
User Manifest Data	Up to 72 Characters		

¹ Sample rate affects battery life as does high temperature exposure See full data sheet.

² 'Stop when full' is the only option for scan rates < 1 minute / sample.

³ Resolution is programmable 8 or 11 bits. More data can be stored in 8 bit mode and battery life is enhanced.

SL50-ACC02

If there are any downsides to the SL50 series data loggers, it could be argued that for some applications they are just too small! For this type of application we provide the SL50-ACC02 rubberized holder. Any member of the SL50 family just clips into the bright yellow holder and is held securely. There is a mounting hole for fixing the holder in place as well as a strong magnet mounted on the back of the holder.

SL50-CLIP

The SL50-CLIP is a small black, plastic key fob that will accept any of the SL50 series data loggers. Each logger just pushes into the clip and the mounting eye provides a convenient way of securing the clip. Operating temperature range 0°C to + 70°C

SL50-WALL

A black plastic wall mounting bracket that allows any of the SL50 series data loggers to be permanently fixed to a wall, door or even a packing crate. The SL50 series loggers protrude through the enclosure which is in turn fixed using two screws.



SL50-ACC01

316 stainless steel enclosures that protect the SL50 series data loggers in harsh environments or where there is likely to be pressures in excess of 100mB. The SL50-ACC01 can be used with pressures up to 10 Bar or submerged in up to 100m water.

SL50-ACC05

Similar to the SL-ACC01, this enclosure has a hole machined into the front face. This allows liquids to come into direct contact with the measuring face of the data logger. This ensures maximum response time while still providing protection against water or fluid ingress.

SL50-ACC03

A lower cost alternative to the SL-ACC01. The SL-ACC03 is constructed from Polyphenylene Sulphide (PPS Ryton) with black flat finish. This produces a lightweight enclosure that protects the data logger at pressures up to 1 Bar or depths of 10m. Maximum operating temperature +125°C.

SL50-ACC06

The lowest cost waterproof enclosure for the SL50 series data loggers. The SL-ACC06 is constructed from neutral colored silicone. This produces a lightweight, two part enclosure that protects the data logger at pressures up to 0.5 Bar or depths of 5m. The maximum operating temperature is well in excess of the +125°C maximum operating temperature of the SL53T.



SL50-ACC07

The SL50-ACC07 is an alarm viewer for all SL50 series data loggers. Just place the data logger in the socket and press the button. A green lamp will illuminate if the alarms have not been triggered and a red light will illuminate if they have.



SL120 series

Data Loggers

**VERSATILE
SINGLE-CHANNEL
COST-EFFECTIVENESS**



The SL120 series of data loggers are very small and compact in design - only 60mm long - and provide an accurate record of temperature or process signals, depending upon the model chosen.

Up to 16,000 records can be stored in the logger which uses the powerful TempIT software package running on a PC, to download the configuration and to retrieve the data. High and Low alarms can be set with a programmable time period for which the alarm limit must be exceeded before it is recognized as an alarm. Any alarm condition detected is clearly shown on the chart and, in the case of the SL121, is annunciated by flashing an on-board LED and audio 'bleeper'.

SL120 located on reader



Features

- Small yet robust
- Cost-effective temperature recording
- Security tie option
- Environment monitoring
- High accuracy and resolution (12-bit)
- IR transfer for fast download
- LED and audio alarm annunciation (SL121)
- Current and Voltage versions

Specification at 20°C

	SL121
Ambient Temperature Range	-40 to +70°C
Resolution	12-bit
Logging Interval	2 sec - 24 hours
Communications - Logger	Infrared link to reader
Communications - Reader	RS232 Port / USB (order as appropriate)
Owner Manifest	64 characters
User Manifest	450 characters
Battery Life	5 years typical @ 20°C
Protection	IP50
Material	High Impact light grey ABS
Enclosure	60 x 35 x 20mm, with key ring hole
Fixing	Mounting hole to take security tie
Max. number of readings	16,384 ¹
Download time	100 secs for 16k readings
Alarm Indication	Red/Green LEDs + audio bleep
Software Requirements	TempIT-Lite (Free Of Charge) or TempIT-Pro

¹ Programmable up to the maximum

Use the SL120 series to:

- Monitor goods in transit
- Perform checks on 4-20mA loops
- Check on ambient conditions in refrigerators and freezers
- Optimize temperature control in HVAC applications
- Record experimental data to use as teaching aids in schools and colleges
- Discreetly monitor working conditions

Sensors and Types

	121/T	121/TR	121/I	121/V
Sensor	Internal Thermistor	External Thermistor	Current	Voltage
Range	- 40 to +70 °C	- 40 to +125 °C or 60 to 250 °C depending upon probe used	0-22 mA	0-1V DC or 0-10 V DC
Response Time for 63%	5 Mins	6 Seconds	200 mSec	200 mSec
Accuracy	+/- 0.5 °C	+/- 0.5 °C	0.06% FS	0.06% FS
Over Voltage / Current Protection	N/A	N/A	Yes	Yes
Reverse Connection Protection	N/A	N/A	Yes	Yes

Order Codes

* Note: sensors are purchased separately.

SL12

[]

1 SL121 Logger with visible & audible alarms

T Internal Temperature
TR Remote Temperature Input
I 4-20mA Input
V1 0-1VDC Input
V10 0-10VDC Input

Readers

SL120R-RS232
SL120R-USB

IR Reader with RS232 cable
 IR Reader with USB cable

Accessories

ACC120-01

Remote temperature assembly for SL120TR
 4mm Dia x 75 mm stainless steel with 1 meter FEP Cable
 (Contact Sales for details of other available sensor configurations)
 Range – 40 to +125°C

ACC120-02
ACC120-03

Same as ACC120-01 but range 60 to 250°C
 Spare 4-20mA or voltage connecting lead

SL130T

High Temperature Data Loggers

VALIDATE AUTOCLAVES AND WASHERS TO PDA MONOGRAPH AND ISO STANDARDS



(showing end cap removed)



The SL130T is a single channel temperature data logger designed to record temperatures in environments up to 140°C (time-limited above 85°C).

It is manufactured from PTFE* material which is impervious to most common chemicals and is ideal for use in areas of food production. A stainless steel sensor, which is protected by the enclosure design, protrudes from the outside of the case to ensure a quick response.

Readings are stored to the internal memory which are subsequently downloaded via an Infra Red communications link to a PC computer running TempIT software (see pages 2/3).

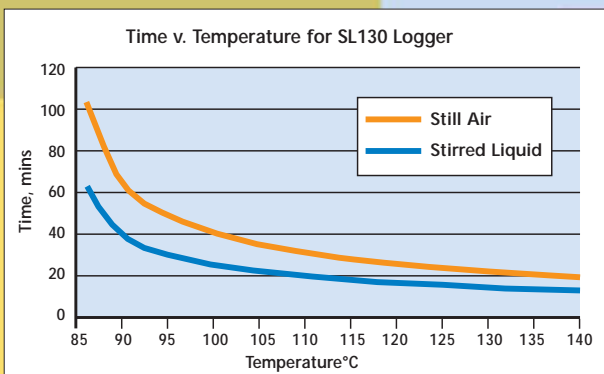
* Environmental: PTFE is unaffected by use in outdoor applications, and by ultra-violet light, weak acids >pH3, strong acids <pH3, strong alkalis <pH11, chlorinated hydrocarbons, and hot water.

Specification

Temperature Range	-30 to +140°C
Sensor	Internal Thermistor
Accuracy	± 0.4 °C ± resolution
Resolution	12-bit < 0.06 °C
Logging Interval	2 sec - 24 hours
Max. number of readings	8,192
Response time (63%)	4 Seconds in a stirred liquid bath, 30 seconds in still air
Programmable alarm points	High and Low alarms with programmable trigger period
Alarm Indication	On Trace
Owner Manifest	64 characters
User Manifest	450 characters
Protection	IP68 with encapsulated electronics
Enclosure material	Robust PTFE construction *
Communications	IR link to reader

Features

- Washer-disinfecter validation
- Autoclave validation
- Waterproof to IP68
- PTFE construction
- Fast response



Order Codes

SL130T	Data Logger
SL120R-232	IR reader RS232 Interface
SL120R-USB	IR reader USB Interface
TempIT-Lite	Operating Software (free from Internet site)
TempIT-Pro	Operating Software with Data Table and MKT calculation

SL150 series

In-Transit Temperature Data Loggers

**VIRTUALLY INDESTRUCTIBLE
LOGGER, IDEAL FOR
TRANSPORTATION MONITORING**



The SL150 is used by carriers and QA departments of food, pharmaceutical and other industries to provide easily accessed, precise temperature data of goods in transit or storage. Housed in a robust sealed plastic tag, the SL150 can be located inside a packing case, on a pallet or attached directly to the product.

Powered by an internal battery, the SL150 will log at programmable intervals. Setting of tag details or alarm thresholds, and downloading the stored data, is achieved by simply placing the logger onto a wireless reader which links directly to a PC, where TempIT software can display any required information.



READER

The SL150 reader connects to a standard PC serial port and the tag is simply placed on top of the reader for configuration and data download.

UNCONDITIONAL WARRANTY

So confident are we in the robustness of this product that we guarantee it for 12 months against failure, and will replace any unit that does, regardless of the cause.

Features

- Secure Data
- Compact and Robust
- Fully Sealed Construction
- Food Grade ABS
- Unique Wireless Downloading
- 1 Year Unconditional Warranty

Specification at 20°C

	SL150	SL151
Power	Internal Battery	
Battery Life	4 years	
Logging Interval	2 sec - 24 hours	
Temperature Range	-30 to +60°C	
Accuracy	+/- 0.5°C	
Resolution	12-bit (0.06°C)	
Number of Readings	1,948	16,384
Reading Rate	1 min to 225 mins	30 secs to 100 hours
Maximum Journey	11 months	4 years
Alarms	2	
Green Active LED	No	Yes
Red Alarm LED	No	Yes
Ingress Protection	IP68	
Manifest Data	67 characters	450 characters
Response Time	7 minutes	
Delayed Start	No	Yes
Stop when full	Yes	

Order Codes

- SL150T Data Logger tag only
- SL151T Data Logger tag only
- SL151T-HS Data Logger Tag with Electronic Signature Support
- SL150R-USB 1 Wireless reader

SL7000

Universal Data Logger

**HIGH PERFORMANCE
AND FLEXIBILITY**



The SL7000 is a data logger with a very flexible combination of inputs - from a single temperature input, up to 4 universal inputs combined with an internal temperature and RH, as well as an optional external temperature and RH sensor. All units also feature a digital input which can be used as an event trigger or as a counter input. Powered by its own user-replaceable battery with life in excess of 3 years, the SL7000 can record up to 120,000 readings at intervals from 1 second to 24 hours. It features unprecedented 16-bit accuracy and resolution for all universal inputs, and is competitively priced regardless of the application. An on-board LCD display (optional) shows selected channel information, and integral LED displays provide immediate scanning and alarm status information.

Specification at 20°C

INPUTS

Features

- Universal Inputs
- 1, 2, 3, 4, 5, 6, 7, 8 and 9 channels
- 16-bit resolution
- LCD display option
- User-replaceable battery
- Typical 3 year battery life
- Digital input

Universal Inputs	<ul style="list-style-type: none"> ● Pt100: 2 or 3 wire °C or °F (BS EN 60751/JIS1604) ● Ni100, Ni120: 2 or 3 wire °C or °F ● Cu10: 2 or 3 wire °C or °F ● Thermocouples J, K, T, R, S, B, N °C or °F ● Thermistor (various types) °C or °F ● (0-20 mA) scaled in engineering units ● +/- 100mV dc scaled in engineering units ● (0-1)V DC scaled in engineering units ● (0-10)V DC scaled in engineering units ● Slidewire scaled in engineering units (100ohm to 10kohm)
Resolutions	All universal inputs 16-bit Internal and External Temperature 12-bit Internal and External RH 8-bit
Counter Input	Used to start logging or as a counter Maximum Count: 65,535 per sample period Maximum Frequency: 32,768 Hz
Start Options	Programmable Delay Period (10 minutes to 1 year) Start on external magnet swipe Start on event trigger
Channel Indicators	8 green LEDs to indicate logging status, changing to red to indicate alarm condition
Comms Indicator	1 yellow LED to indicate comms activity
Sample Rate	1 second to 24 hours for all channels
Display	Optional 3.5 digit LCD with channel indication and low battery warning
Communication Interface	USB isolated (5-pin mini-USB connector)
Sample Method; Selectable	Point Averaging Maximum Minimum

Specification (continued)

GENERAL

Memory Size	0 or 2 universal inputs 4 universal inputs	60,000 readings 120,000 readings
Battery Life	Typical 3 years (2,700mAh)	
Ambient Operating Range	-30 to +80°C	
Manifest Text (User)	256 characters	
Manifest Text (Owner)	256 characters	
Alarm Setpoints	Independent High and Low Latching per channel	
Low Battery Warning	Displayed when battery life has less than one month to go	

Non-display version

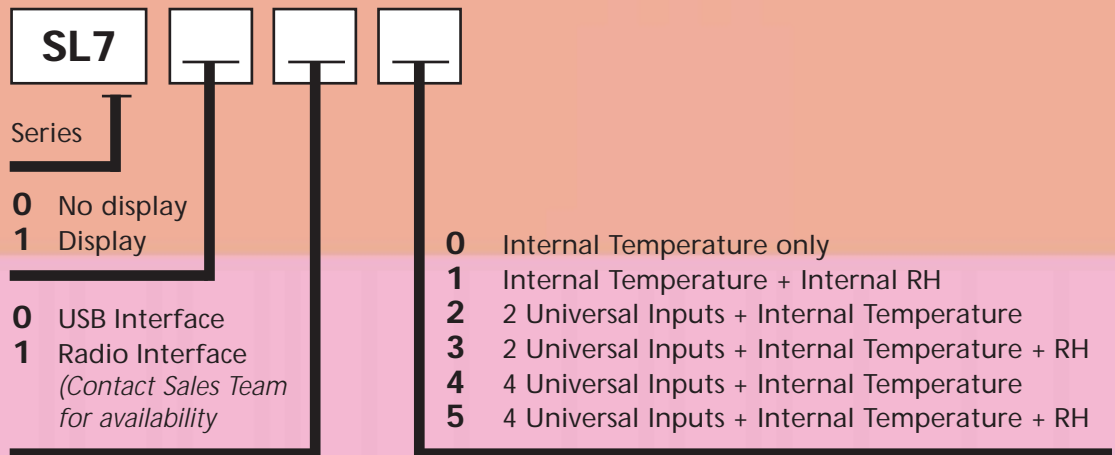


External Temperature / RH Sensor

As an optional extra, the ACC7000-01 provides an additional temperature and RH input. This unit is pre-calibrated, and simply plugs into the base of the main unit.



Order Codes



Accessories

- | | |
|---------------|--|
| SL-ACC7000-01 | External Temp/RH Probe |
| SL-ACC7000-02 | Replacement Miniature USB connecting lead |
| SL-ACC7000-03 | Replacement Lithium Thionyl Chloride Battery |
| SL-ACC7000-04 | External power supply (cannot be used with ACC7000-01) |
| SL-ACC7000-05 | Spare 14 way input connector |
| TempIT-Lite | Operating Software (Free Of Charge) |
| TempIT-Pro | Upgrade to professional version |
| TempIT-HS | High Security Version |

SL960 series

High Precision Data Loggers

**SELF-CONTAINED
PRESSURE
DATA LOGGING**



SL963

SL964

The SL963 and 964 are self-contained battery-powered data loggers for measuring and recording pressure and level. The SL963T allows measurement of pressure and ambient temperature, while the SL963TD has a built in LED display, and the SL963X is certified for hazardous area installations.

The SL964 is suitable for measuring fluid level and temperature, and is particularly suited to portable installations, or where a conventional power supply cannot be provided. A high-accuracy stainless steel submersible pressure transducer provides level measurement for recording by the high-resolution data logger, mounted in a IP67 weatherproof enclosure. Both loggers store up to 130,000 readings, with a battery life of up to 10 years. An interconnecting cable is factory-fitted to the required length, via which data is fed to a PC via a RS232 interface.

Features

- Self-powered
- Display option
- Temperature option
- EXi option
- Pressure / level

Specification at 20°C

	SL963	SL964
Pressure Range	0 to 100mB minimum 0 to 1000B maximum	0 to 1 MWG minimum 0 to 250 MWG maximum
Ambient Temperatures	0°C to +70°C - standard -25°C to +85°C - optional -25°C to +70°C - SL963X only	
Accuracy	< +/- 0.25% full scale	
Resolution	< 0.01% full scale (14-bit)	
Sample Rate	Programmable between 2 secs and 24 hours, in 2 sec intervals	
Power Supply	Lithium Battery; user-replaceable 3.6V / 1.9Ah, size AA	
Battery Life	1 reading per minute - 1 year 1 reading per hour - 10 years 6 readings per hour - 5 years	
Data Memory	130,000 measurements. Non-volatile memory	

Order Codes

SL963	Pressure-only data logger
SL963D	SL963 + Integral display
SL963T	Pressure and Temperature Data Logger
SL963TD	SL963T + Integral display
SL963X	Intrinsically Safe pressure logger
SL963TD- DATA	Communications lead for SL963TD
SL963X-DATA	Communications lead for SL963X
SL960-DATA	Communications lead for SL963 and SL963T - includes software
SL964GL	Pressure-only level logger
SL964G	Temperature and Pressure Level Logger
SL964-DATA	SL964 communications lead

Please specify: Pressure range, operating temperature, medium, process connection, whether gauge or absolute, and cable length for SL964.

Thermal Barriers

**LOG DATA AT THE
HEART OF HOT AND
COLD PROCESSES**



With the introduction of more stringent food quality programs, it is now more important than ever for food manufacturers to have documentary evidence that the produce has been cooked or chilled for the required time periods.

The SL Thermal Barriers allow a SL7000 data logger to pass through any oven or chiller and provide through-process data logging and temperature profiling. The system is regularly used in tunnel ovens, rotary ovens, rack ovens, spiral freezers and blast freezers. It is also suitable for applications in powder coating and stove enamelling.

Features

- **Robust construction**
- **Resistant to ingress of air, water and steam**
- **Suitable for hot and cold processes, from -150°C to +600°C**
- **Can remain in-process for up to 6 hours**

When used in conjunction with Signatrol data loggers, an accurate profile of the heating or cooling application can be displayed in graphical or data table format. There are no trailing wires to get tangled in the conveyor or process, and the whole system passes through the application giving an accurate profile of process against time.

Typical Application: Thermal Barrier with Data logger and thermocouples in a rack oven.



Order Codes:

SL-TB130
SL-TB110
SL-TB90
SL-TB70
SL-TB50

ASSOCIATED PRODUCTS



Signatrol Data Loggers

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Local Representation

